

or stabilization. If replicate tests are run, three additional tests which confirm to this section shall be run, and the final reported test results must be the average of all the valid tests.

(e) A minimum of thirty seconds sampling time shall be used for average transient smoke measurements. The opacity values used for this averaging must be collected at a minimum rate of 1 data point per second, and all data points used in the averaging must be equally spaced in time.

[65 FR 59962, Oct. 6, 2000]

§ 86.1375–2007 Equipment specifications for field testing.

For testing conducted with engines installed in vehicles, including field testing conducted to measure emissions under Not-To-Exceed test procedures, use the test procedures and equipment specified in 40 CFR part 1065, subpart J.

[70 FR 34619, June 14, 2005]

§ 86.1380–2004 Load response test.

(a) *General.* This section applies to 2004 through 2007 model year heavy-duty diesel engines. The purpose of this test procedure is to measure the brake-specific gaseous and particulate emissions from a heavy-duty diesel engine as it is suddenly loaded, with its fueling lever, at a given engine operating speed. The results of this test procedure are not compared to emission standards, and this test is not considered part of the Federal Test Procedure. This procedure shall be conducted on a dynamometer.

(b) *Test conditions and equipment.* All laboratory conditions, laboratory equipment, engine set-up procedures, test fuel, and testing conditions specified in this subpart for transient testing shall apply to the Load Response Test where applicable.

(c) *Test sequence.* (1) The test has 5 separate measurement segments, each identified by a specific engine speed. At each of the following speeds, beginning with the lowest torque point at that engine speed within the NTE control area for NMHC+NO_x, the engine fuel control shall be moved suddenly to the full fuel position and held at that point for four seconds, while the specified

speed is maintained constant within the tolerances of the test facility. After the four second full fuel position, the load should be immediately brought back to the minimum NTE control area load for the specified engine speed for a period of 6 seconds. Prior to the beginning of each measurement segment, the engine shall be warmed up at the supplemental steady-state Mode 4 conditions (75% engine load, Speed B as specified in § 86.1360) until engine oil temperature has stabilized.

(i) Speed A as determined in § 86.1360(c);

(ii) Speed B as determined in § 86.1360(c);

(iii) Speed C as determined in § 86.1360(c);

(iv) Speed D as determined in § 86.1360(c);

(v) Speed E as determined in § 86.1360(c).

(2) The test sequence at each engine speed may be repeated, without pause between repeats, if it is necessary to obtain sufficient particulate matter sample amount for analysis.

(3) The exhaust emissions sample shall be analyzed using the applicable procedures under § 86.1340, and the exhaust emission shall be calculated using the applicable procedures under § 86.1342, for each measurement segment. Sampling rates for engine speed, engine load, and gaseous emissions shall performed a minimum rate of 10 Hz. Emissions for all regulated pollutants must be calculated and reported for each test speed condition in terms of g/bhp-hr.

(4) Data must be collected beginning with the start of the transition from the minimum NTE control area load to the full fuel position. Data must be collected until the end of the (final if repeated) 6 second operational period at the minimum NTE control area load described in paragraph (c)(1) of this section. Good engineering practice must be used to ensure that the sampling time is properly aligned with the engine operation.

[65 FR 59963, Oct. 6, 2000]